



## Canadian Patents Database

(12) Patent Application:

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(11) CA 2071567

(54) BLOOD PRODUCT, A METHOD OF PRODUCING THE SAME AND A METHOD OF DETERMINING THE VIRUS INACTIVATION CAPACITY OF AN INACTIVATION TREATMENT

(54) PRODUIT DU SANG, LEUR METHODE DE PRODUCTION ET METHODE DE DETERMINATION DE LA CAPACITE D'INACTIVATION VIRALE D'UN TRAITEMENT D'INACTIVATION

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### ABSTRACT:

#### ABSTRACT OF THE DISCLOSURE

The invention relates to a blood product, exclusive of albumin, inactivated relative to infectious agents, the blood product conforming to a total virus reduction factor of at least 40, having a biologic activity of at least 50 % based on its activity prior to effecting inactivation of the infectious agents. The blood product according to the invention may be produced from conventional blood products and is virus-safe.

CLAIMS: [Show all claims](#)

\*\*\* Note: Data on abstracts and claims is shown in the official language in which it was submitted.

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(19) (CA) APPLICATION FOR CANADIAN PATENT (12)

(54) Blood Product, a Method of Producing the Same and a  
Method of Determining the Virus Inactivation Capacity of  
an Inactivation Treatment

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Notice: The specification contained herein as filed

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The invention relates to a virus-inactivated blood product, a method of producing the same as well as a method of determining the virus-inactivating capacity of an inactivation treatment.

By blood products, products from human or animal blood or plasma are meant, which are intended for therapeutic, prophylactic or diagnostic applications. Such products may contain enzymes, proenzymes including coagulation factors, enzyme co-factors, enzyme inhibitors, immunoglobulins, albumin, plasminogen, fibrinogen, fibronectin or plasma.

The administration of blood products involves the risk of infection due to infectious agents possibly present in the donor plasma, such as hepatitis or AIDS viruses. Even if exclusively plasma that has been tested for its absence of these infectious agents is used, the danger that a patient might be infected cannot be excluded because of the limited sensitivity of the test methods. When producing blood products one is therefore forced to inactivate possibly present infectious agents by various methods.

There exists a great number of publications concerned with the inactivation of pathogens in blood products.

The various methods include:

- heating the blood products in aqueous solution, possibly with the addition of virucidal

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THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE  
PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. A blood product, exclusive of albumin, inactivated relative to infectious agents, said blood product having a total virus reduction factor of at least 40 and a biologic activity of at least 50%, based on the activity prior to effecting inactivation of infectious agents, to be obtained by an inactivation treatment, wherein
  - a) the blood product is treated in an aqueous solution containing at least 2 % of a detergent, and subsequently is heated in the solid state, or
  - b) the blood product is heated in the solid state and subsequently is treated in an aqueous solution containing at least 2 % of a detergent.
2. A blood product as set forth in claim 1, wherein said aqueous solution contains at least 5 % of a detergent.
3. A blood product as set forth in claims 1 or 2, wherein said blood product is treated in an aqueous solution containing more than 10 % of a detergent and is heated in the solid state.
4. A blood product, exclusive of albumin, inactivated relative to infectious agents, said blood product

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ABSTRACT OF THE DISCLOSURE

The invention relates to a blood product, exclusive of albumin, inactivated relative to infectious agents, the blood product conforming to a total virus reduction factor of at least 40, having a biologic activity of at least 50 %, based on its activity prior to effecting inactivation of the infectious agents. The blood product according to the invention may be produced from conventional blood products and is virus-safe.